CLAIMS

What is claimed is:

1. An apparatus, comprising:

a first member defining a first set of channel walls, the first set of channel walls having a first channel gap between two respective facing walls of the first set of channel walls;

a second member defining a second set of channel walls, the second member being coupled to the first member such that the second set of channels walls are interlaced with the first set of channel walls;

a fluid inlet provided on one of the first and second members; and

a fluid outlet provided on one of the first and second members.

2. The apparatus of claim 1, wherein a second channel gap between two respective facing walls of the interlaced first and second sets of channel walls is narrower than the first channel gap.

3. The apparatus of claim 1, wherein a channel structure defined by the first and second sets of channel walls provides at least two fluid flow paths between the fluid inlet and the fluid outlet.

4. The apparatus of claim 1, wherein a channel structure defined by the first and second sets of channel wall provides primarily non-linear flow paths between the fluid inlet and the fluid outlet.

5. The apparatus of claim 1, wherein the first member includes a first index feature which cooperates with a corresponding second index feature on the second member to aid in aligning the first and second members with respect to each other.

6. The apparatus of claim 1, wherein a surface of a wall of the first set of channel walls is tapered at an angle of greater than about five degrees.

7. An apparatus, comprising:

an enclosure having a fluid inlet and a fluid outlet with fluid communication with the fluid inlet; and

a channel structure inside the enclosure between the inlet and the outlet defining at least two fluid flow paths.

8. The apparatus of claim 7, wherein the channel structure provides primarily non-linear flow paths.

9. The apparatus of claim 7, wherein a wall of the channel structure is tapered at an angle of greater than about five degrees.

10. A method, comprising:

forming a first member defining a first set of channel walls, the first set of channel walls having a first channel gap between two respective facing walls of the first set of channel walls;

forming a second member defining a second set of channel walls;

coupling the second member to the first member such that the second set of channels walls are interlaced with the first set of channel walls;

providing a fluid inlet on one of the first and second members; and

providing a fluid outlet on one of the first and second members.

11. The method of claim 10, wherein a second channel gap between two respective facing walls of the interlaced first and second sets of channel walls is narrower than the first channel gap.

12. The method of claim 10, further comprising:

providing at least two fluid flow paths between the fluid inlet and the fluid outlet.

13. The method of claim 10, further comprising:

providing primarily non-linear flow paths between the fluid inlet and the fluid outlet.

14. The method of claim 10, further comprising:

providing a first index feature on the first member;

providing a second index feature on the second member; and

aligning the first and second members in accordance with the first and second index features.

15. The method of claim 10, further comprising:

tapering a surface of a wall of the first set of channel walls at an angle of greater than about five degrees.

16. A method, comprising:

providing an enclosure having a fluid inlet and a fluid outlet with fluid communication with the fluid inlet; and

forming a channel structure inside the enclosure between the inlet and the outlet defining at least two fluid flow paths.

17. The method of claim 16, further comprising:

providing primarily non-linear flow paths between the fluid inlet and the fluid outlet.

18. The method of claim 16, further comprising:

tapering a surface of a wall of the channel structure at an angle of greater than about five degrees.

19. A system, comprising:

an electronic component; and

a cold plate thermally coupled to the electronic component, the cold plate comprising:

a first member defining a first set of channel walls, the first set of channel walls having a first channel gap between two respective facing walls of the first set of channel walls;

a second member defining a second set of channel walls, the second member being coupled to the first member such that the second set of channels walls are interlaced with the first set of channel walls;

a fluid inlet provided on one of the first and second members; and

a fluid outlet provided on one of the first and second members.

20. The system of claim 19, wherein a second channel gap between two respective facing walls of the interlaced first and second sets of channel walls is narrower than the first channel gap.

21. The system of claim 19, wherein a channel structure defined by the first and second sets of channel walls provides at least two fluid flow paths between the fluid inlet and the fluid outlet.

22. The system of claim 19, wherein a channel structure defined by the first and second sets of channel wall provides primarily non-linear flow paths between the fluid inlet and the fluid outlet.

23. The system of claim 19, wherein the first member includes a first index feature which cooperates with a corresponding second index feature on the second member to aid in aligning the first and second members with respect to each other.

24. The apparatus of claim 19, wherein a surface of a wall of the first set of channel walls is tapered at an angle of greater than about five degrees.

25. The system of claim 19, further comprising:

a heat dissipation device coupled to the cold plate by a loop of tubing;

cooling fluid disposed in the tubing; and

a pump adapted to circulate the cooling fluid.

26. The system of claim 25, further comprising:

a fan adapted to provide cooling air to at least one of the heat dissipation device and the cold plate.

27. A system, comprising:

an electronic component; and

a cold plate thermally coupled to the electronic component, the cold plate comprising:

an enclosure having a fluid inlet and a fluid outlet with fluid communication with the fluid inlet; and

a channel structure inside the enclosure between the inlet and the outlet defining at least two fluid flow paths.

28. The system of claim 27, wherein the channel structure provides primarily non-linear flow paths.

29. The system of claim 27, wherein a wall of the channel structure is tapered at an angle of greater than about five degrees.

30. The system of claim 27, further comprising:

a heat dissipation device coupled to the cold plate by a loop of tubing;

cooling fluid disposed in the tubing; and

a pump adapted to circulate the cooling fluid.

31. The system of claim 30, further comprising:

a fan adapted to provide cooling air to at least one of the heat dissipation device and the cold plate.